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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BRIER, JEFFERY A

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2628

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09/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/780,852	ROSENBERG ET AL.
	Examiner	Art Unit
	Jeffery A. Brier	2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 25 July 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 82-92 and 102-104 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 82-92 and 102-104 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements filed on 4/11/2006, 6/9/2006, 9/18/2006, and 7/25/2006 have been reviewed.

2. The information disclosure statement (IDS) filed on 9/23/2004 has been reviewed. This IDS makes reference to parent applications 09/748,051, 08/374,288, 09/140,717, and 08/560,091. The US patents have been considered with the exception of one patent on sheet 1 of 8 and one patent on sheet 2 of 8. The US patent on sheet 1 of 8 was lined through because the given patent number is not the named patent and the US patent on sheet 2 of 8 was lined through because the given patent number is not the named patent. The foreign patents on sheet 5 of 8 have not been considered because copies of those documents are not present in the parent application's file wrapper and the foreign patents on sheet 1 of 3 were present on a CD filed on 5/12/2003 in 09/748,051 and they have not been considered because this is not a proper manner of submitting copies of references, see MPEP 609.04II Rev. 5, Aug. 2006 at page 600-153 second column last sentence of the paragraph before III which states:

A CD cannot be used to submit an IDS listing or copies of the documents cited in the IDS.

The non-patent literature lined through on sheets 2 of 3 and 3 of 3 were not present in any of 09/748,051; 08/374,288, 09/140,717, and 08/560,091. The non-patent literature

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considered on sheet 3 of 3 was found in the '288 application. The non-patent literature lined through on sheets 6 of 8, 7 of 8, and 8 of 8 were not present in any of 09/748,051; 08/374,288, 09/140,717, and 08/560,091. The non-patent literature considered on sheet 6 of 8 was found in the '091 application with the exception of Iwata article which was found in the '288 application. The non-patent literature considered on sheets 7 of 8 and 8 of 8 were found in the '288 application.

3. The information disclosure statement (IDS) filed on 2/19/2004 has been reviewed. This IDS makes reference to parent application 09/748,051. The US patents have been considered with the exception of one patent on sheet 2 of 8. The US patent on sheet 2 of 8 was lined through because the given patent number is not the named patent. The foreign patents on sheet 5 of 8 have not been considered because copies of those documents are not present in the 09/748,051 file wrapper. The non-patent literature on sheets 5 of 8 and 6 of 8 and the first two on sheet 7 of 8 were present on a CD filed on 5/12/2003 in 09/748,051 and they have not been considered because this is not a proper manner of submitting copies of references, see MPEP 609.04II Rev. 5, Aug. 2006 at page 600-153 second column last sentence of the paragraph before III. The non-patent literature lined through on sheet 7 of 8 after and including Snow and on sheet 8 of 8 were not present in 09/748,051 file wrapper.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 82-92 and 102-104 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 82:

At lines 4 and 5 “elements being flexibly coupled to each other” is claimed, however how they are flexibly coupled is unclear. Are the plurality of claimed elements unitary? How are they flexibly coupled? Is the flexibly a flex joint, see US Patent No. 6,995,744 claim 1 and US Patent No. 6,704,001 claim 8/7/5/1. Is the flexibly a part of a capstan cable drive system see US Patent No. 6,246,390 claim 23 and US Patent No. 6,057,828 claims 28 and 42 and US Patent No. 5,731,804 claim 22. Is the flexibly a flexible coupling allowing rotation? Does the flexibly provide rotational flex, see US Patent No. 7,091,950 claim 1. Thus, the metes and bounds of the claim is unclear

Claim 90:

At line 6 “third member flexibly coupled to the first member” is claimed. For the same reasons given for claim 82 above this claim limitation is unclear.

Claims 83-89, 91, 92, and 102-104:

These dependent claims do not clarify the indefinite issues of their respective parent claims.

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6. A proper prior art analysis of the claims cannot be made because the metes and bounds of the claims are not definite and because the specification does not clarify the claims. Thus, a prior art rejection cannot be made with the currently pending claims. *In re Steele*, 305 F.2d 859,134 USPQ 292 (CCPA 1962) (it is improper to rely on speculative assumptions regarding the meaning of a claim and then base a rejection under 35 U.S.C. 103 on these assumptions).

7. In order to perform compact prosecution obvious type double patenting rejections based upon applicants or assignees patents follows since their specifications are the same or similar to this specification, thus, claim interpretation of the pending claims and the patented claims is based upon the specifications guidance in determining the scope of the pending claims and the patented claims.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 82-86, 88-91, and 102-104 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 3 or 5 of U.S. Patent No. 7,193,607. Although the conflicting claims are not identical, they are not patentably distinct from each other.

The following table corresponds the pending claims with the conflicting patented claims.

Pending claims	82	83	84	85	86	87	88	89	90	91	92	102	103	104
Patented claims	3/1	3/1	5/4/3/1	5/4/3/1	5/4/3/1		3/1	3/1	3/1	3/1		3/1	3/1	3/1

A comparison of pending claim 82 and patented claim 1 follows.

Pending claim 82	Patented claim 1.
<p>82. (Previously Presented)</p> <p>An apparatus, comprising:</p> <p>a manipulandum moveable in at least two degrees of freedom;</p> <p>a linkage coupled to the manipulandum, the linkage including a plurality of elements, at least a subset of elements from the plurality of <u>elements</u> being flexibly coupled to each other and moveable in at least one of said two rotary degrees of freedom; and</p>	<p>1. An interface device comprising: a manipulandum moveable in at least two rotary degrees of freedom; and a five-bar closed-loop mechanism coupled to said manipulandum, said mechanism providing said at least two rotary degrees of freedom with respect to a ground, wherein said mechanism includes four members forming a unitary piece coupled to said ground, wherein said members are coupled to each other by <u>flexible couplings</u></p>

at least one sensor configured to detect at least one of a position and a movement of the manipulandum in the at least two degrees of freedom and output a sensor signal based on the detected at least one of the position and the movement.	allowing rotation of said members. 3. An interface device as recited in claim 1, wherein said mechanism includes: a first extension member, a <u>first central member flexibly coupled to said first extension member</u> , a second central member coupled to said first central member, and a <u>second extension member flexibly coupled to said second central member</u> , wherein said manipulandum is coupled to one of said central members.
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From the above comparisons it is clear that the pending claims are broader versions of the patented claims. Broader versions of patented claims are an obvious way for applicant to claim the same thing patented. *In re Vogel*, 422 F.2d 438, 164 USPQ 619, 623 (CCPA 1970). Vogel stated on page 623 "*The answer to the second analysis question, therefore, is yes, and the claim is not allowable in the absence of a terminal disclaimer. The correctness of this conclusion is demonstrated by observing that claim 10, by reciting "meat," includes pork. It is further noted that viewing the inventions in reverse order, i.e. as though the broader claims issued first, does not reveal that the narrower (pork) process is in any way unobvious over the broader (meat) invention disclosed and claimed in the instant application.*". Thus, this application's broader claims are not unobvious over the above identified patented claims.

Another relevant CAFC decision is *In re Braat* (CA FC 1991) 19 USPQ2d 1289. Braat stated on page 1292 "*The following are excerpts from the Board's opinion: We agree with and sustain the rejection of claims 8, 9, 10, 13, 15, 16 and 17 on the basis of double patenting with respect to claims 5/1 and 6/1 of the Dil patent. The claims here*

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*being broader than claims 5/1 and 6/1 in the Dil Patent, the double patenting rejection is of the type created by the courts to prevent unjustified timewise extension of the right to exclude granted by a patent no matter how the exclusion [sic, extension] is brought about. See *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982).*" Braat also stated on page 1293 first full paragraph "*The only difference between the claims of Braat and claims 5/1 and 6/1 of Dil is the omission of the requirement in the claims of Dil of information areas having side walls which are angled at a particular angle, and we do not think that omission of such a limitation in the present case would constitute an unobvious modification.*"

10. Claims 82-92 and 102-104 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 or 2 or 5 of U.S. Patent No. 6,697,048. Although the conflicting claims are not identical, they are not patentably distinct from each other.

The following table corresponds the pending claims with the conflicting patented claims.

Pending claims	82	83	84	85	86	87	88	89	90	91	92	102	103	104
Patented claims	1	2/1	5/1	5/1	5/1	1 see figure 12	2/1	2/1	1	1	1 see figure 12	2/1	1	1

A comparison of pending claim 82 and patented claim 1 follows.

Pending claim 82	Patented claim 1.
<p>82. (Previously Presented)</p> <p>An apparatus, comprising:</p> <p>a manipulandum moveable in at least two degrees of freedom;</p> <p>a linkage coupled to the manipulandum, the linkage including a plurality of elements, at least a subset of elements from the plurality of elements being flexibly coupled to each other and moveable in at least one of said two rotary degrees of freedom; and</p> <p>at least one sensor configured to detect at least one of a position and a movement of the manipulandum in the at least two degrees of freedom and output a sensor signal based on the detected at least one of the position and the movement.</p>	<p>1. An interface apparatus for interfacing motion of a user with a computer system, said interface apparatus comprising: a user manipulatable object physically contacted by said user and moveable by said user in at least two rotary degrees of freedom; a linkage coupled to said user manipulatable object and providing said at least two rotary degrees of freedom to said user manipulatable object, each rotary degree of freedom being about an axis of rotation, said linkage including a plurality of members, wherein a selected number of said plurality of members have been formed as a unitary member in which <u>flex is provided between said selected number of members</u>, said <u>flex permitting motion between said selected number of members</u> that allows motion of said user manipulatable object in at least one of said rotary degrees of freedom, wherein said plurality of members of said linkage are formed as a closed-loop linkage in which said <u>members are flexibly coupled to each other</u> as segments of said unitary member; and at least one sensor able to detect a position or motion of said user manipulatable object along said at least two degrees of freedom and outputting sensor signals, wherein said sensor signals, or a representation thereof, are received by said computer system.</p>

From the above comparisons it is clear that the pending claims are broader versions of the patented claims. Broader versions of patented claims are an obvious

way for applicant to claim the same thing patented. *In re Vogel*, 422 F.2d 438, 164 USPQ 619, 623 (CCPA 1970). Vogel stated on page 623 “*The answer to the second analysis question, therefore, is yes, and the claim is not allowable in the absence of a terminal disclaimer. The correctness of this conclusion is demonstrated by observing that claim 10, by reciting "meat," includes pork. It is further noted that viewing the inventions in reverse order, i.e. as though the broader claims issued first, does not reveal that the narrower (pork) process is in any way unobvious over the broader (meat) invention disclosed and claimed in the instant application.*”. Thus, this application’s broader claims are not unobvious over the above identified patented claims.

Another relevant CAFC decision is *In re Braat* (CA FC 1991) 19 USPQ2d 1289. Braat stated on page 1292 “*The following are excerpts from the Board's opinion: We agree with and sustain the rejection of claims 8, 9, 10, 13, 15, 16 and 17 on the basis of double patenting with respect to claims 5/1 and 6/1 of the Dil patent. The claims here being broader than claims 5/1 and 6/1 in the Dil Patent, the double patenting rejection is of the type created by the courts to prevent unjustified timewise extension of the right to exclude granted by a patent no matter how the exclusion [sic, extension] is brought about. See *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982).*” Braat also stated on page 1293 first full paragraph “*The only difference between the claims of Braat and claims 5/1 and 6/1 of Dil is the omission of the requirement in the claims of Dil of information areas having side walls which are angled at a particular angle, and we do not think that omission of such a limitation in the present case would constitute an unobvious modification.*”

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11. Claims 82-86, 88-91, and 102-104 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 or 4 or 6 of U.S. Patent No. 6,639,581. Although the conflicting claims are not identical, they are not patentably distinct from each other.

The following table corresponds the pending claims with the conflicting patented claims.

Pending claims	82	83	84	85	86	87	88	89	90	91	92	102	103	104
Patented claims	1	4/1	6/5/3/1	6/5/3/1	6/5/3/1		4/1	4/1	1	1		4/1	1	1

A comparison of pending claim 82 and patented claim 1 follows.

Pending claim 82	Patented claim 1.
<p>82. (Previously Presented)</p> <p>An apparatus, comprising:</p> <p>a manipulandum moveable in at least two degrees of freedom;</p> <p>a linkage coupled to the manipulandum, the linkage including a plurality of elements, at least a subset of elements from the plurality of <u>elements being flexibly coupled to each other</u> and moveable in at least one of said two rotary degrees of freedom; and</p> <p>at least one sensor configured to detect at least one of a position and a movement of the manipulandum in the at least two degrees of freedom and output a sensor signal based on the detected at</p>	<p>1. An interface device manipulated by a user and providing input signals to a host computer, the interface device comprising:</p> <p>a manipulandum physically contacted by said user and moveable in at least two rotary degrees of freedom; a five-bar closed-loop mechanism coupled to said manipulandum, said mechanism providing said at least two rotary degrees of freedom with respect to a ground, wherein said mechanism includes four members forming a unitary piece coupled to said ground, wherein said <u>members are coupled to each other by flexible couplings providing flex</u> that allows rotation of said members; and a sensor coupled to said</p>

least one of the position and the movement.	mechanism that senses a position of said manipulandum in at least one of said degrees of freedom and outputs a sensor signal, wherein a representation of said sensor signal is provided to said host computer.
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From the above comparisons it is clear that the pending claims are broader versions of the patented claims. Broader versions of patented claims are an obvious way for applicant to claim the same thing patented. *In re Vogel*, 422 F.2d 438, 164 USPQ 619, 623 (CCPA 1970). Vogel stated on page 623 "*The answer to the second analysis question, therefore, is yes, and the claim is not allowable in the absence of a terminal disclaimer. The correctness of this conclusion is demonstrated by observing that claim 10, by reciting "meat," includes pork. It is further noted that viewing the inventions in reverse order, i.e. as though the broader claims issued first, does not reveal that the narrower (pork) process is in any way unobvious over the broader (meat) invention disclosed and claimed in the instant application.*". Thus, this application's broader claims are not unobvious over the above identified patented claims.

Another relevant CAFC decision is *In re Braat* (CA FC 1991) 19 USPQ2d 1289. Braat stated on page 1292 "*The following are excerpts from the Board's opinion: We agree with and sustain the rejection of claims 8, 9, 10, 13, 15, 16 and 17 on the basis of double patenting with respect to claims 5/1 and 6/1 of the Dil patent. The claims here being broader than claims 5/1 and 6/1 in the Dil Patent, the double patenting rejection is of the type created by the courts to prevent unjustified timewise extension of the right to exclude granted by a patent no matter how the exclusion [sic, extension] is brought*

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about. See *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982)." Braat also stated on page 1293 first full paragraph "The only difference between the claims of Braat and claims 5/1 and 6/1 of Dil is the omission of the requirement in the claims of Dil of information areas having side walls which are angled at a particular angle, and we do not think that omission of such a limitation in the present case would constitute an unobvious modification."

12. Claims 82-92 and 102-104 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 or 4 of U.S. Patent No. 6,486,872. Although the conflicting claims are not identical, they are not patentably distinct from each other.

The following table corresponds the pending claims with the conflicting patented claims.

Pending claims	82	83	84	85	86	87	88	89	90	91	92	102	103	104
Patented claims	1	4/3/1	1	1	1	1	4/3/1	4	1	1	1	4/3/1	1	1

For claims 84, 85, and 86: See figure 5 where pistons 20a , 20b are grounded.

For claims 87 and 92: See Figure 5 piston rod 104a, 104b which meet the claimed dimensions.

A comparison of pending claim 82 and patented claim 1 follows.

Pending claim 82	Patented claim
<p>82. (Previously Presented)</p> <p>An apparatus, comprising:</p> <p>a manipulandum moveable in at least two degrees of freedom;</p> <p>a linkage coupled to the manipulandum, the linkage including a plurality of elements, at least a subset of elements from the plurality of <u>elements being flexibly coupled to each other</u> and moveable in at least one of said two rotary degrees of freedom; and</p> <p>at least one sensor configured to detect at least one of a position and a movement of the manipulandum in the at least two degrees of freedom and output a sensor signal based on the detected at least one of the position and the movement.</p>	<p>1. A force feedback interface device for use with a host computer displaying a graphical environment, said force feedback interface device providing force feedback sensations to a user, said interface device comprising: a user manipulatable object contacted by a user and moveable in two linear degrees of freedom, said two linear degrees of freedom substantially defining a plane, said user manipulatable object including a recess for contacting a tip portion of at least one finger of said user or a tip portion of a stylus; at least one sensor in communication with said host computer and coupled to said user manipulatable object for sensing positions of said user manipulatable object along at least one of said degrees of freedom; and a first and a second actuator, each in communication with said host computer, said first actuator comprising a first linear member mechanically coupled to said user manipulatable object to apply a force to said object along a first linear degree of freedom, and said second actuator comprising a second linear member mechanically coupled to said user manipulatable object to apply a force to said object along a second linear degree of freedom, wherein said first linear member is a <u>flexible member that flexes</u> when said user manipulatable object is moved in said second degree of freedom, and wherein said second linear member is a <u>flexible member that flexes</u> when said user manipulatable object is moved in said first degree of freedom.</p>

From the above comparisons it is clear that the pending claims are broader versions of the patented claims. Broader versions of patented claims are an obvious way for applicant to claim the same thing patented. *In re Vogel*, 422 F.2d 438, 164 USPQ 619, 623 (CCPA 1970). Vogel stated on page 623 "*The answer to the second analysis question, therefore, is yes, and the claim is not allowable in the absence of a terminal disclaimer. The correctness of this conclusion is demonstrated by observing that claim 10, by reciting "meat," includes pork. It is further noted that viewing the inventions in reverse order, i.e. as though the broader claims issued first, does not reveal that the narrower (pork) process is in any way unobvious over the broader (meat) invention disclosed and claimed in the instant application.*". Thus, this application's broader claims are not unobvious over the above identified patented claims.

Another relevant CAFC decision is *In re Braat* (CA FC 1991) 19 USPQ2d 1289. Braat stated on page 1292 "*The following are excerpts from the Board's opinion: We agree with and sustain the rejection of claims 8, 9, 10, 13, 15, 16 and 17 on the basis of double patenting with respect to claims 5/1 and 6/1 of the Dil patent. The claims here being broader than claims 5/1 and 6/1 in the Dil Patent, the double patenting rejection is of the type created by the courts to prevent unjustified timewise extension of the right to exclude granted by a patent no matter how the exclusion [sic, extension] is brought about. See *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982).*" Braat also stated on page 1293 first full paragraph "*The only difference between the claims of Braat and claims 5/1 and 6/1 of Dil is the omission of the requirement in the claims of Dil of information areas having side walls which are angled at a particular angle, and we do*

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not think that omission of such a limitation in the present case would constitute an unobvious modification."

13. Claims 82-92 and 102-104 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 or 6 or 10 of U.S. Patent No. 5,805,140. Although the conflicting claims are not identical, they are not patentably distinct from each other.

The following table corresponds the pending claims with the conflicting patented claims.

Pending claims	82	83	84	85	86	87	88	89	90	91	92	102	103	104
Patented claims	1	1	6/4/1	6/4/1	6/4/1	10/4/1	1	1	1	1	10/4/1	1	1	1

A comparison of pending claim 82 and patented claim 1 follows.

Pending claim 82	Patented claim 1.
<p>82. (Previously Presented)</p> <p>An apparatus, comprising:</p> <p>a manipulandum moveable in at least two degrees of freedom;</p> <p>a linkage coupled to the manipulandum, the linkage including a plurality of elements, at least a subset of elements from the plurality of <u>elements</u> being flexibly coupled to each other and moveable in at least one of said two rotary degrees of freedom; and</p> <p>at least one sensor configured to</p>	<p>1. An interface apparatus, for interfacing motion of a user manipulable object with an electrical system, said interface apparatus comprising:</p> <p>a user object being physically contacted by a user;</p> <p>a gimbal mechanism coupled to said user object and providing at least two degrees of freedom to said user object, said gimbal mechanism including a</p>

<p>detect at least one of a position and a movement of the manipulandum in the at least two degrees of freedom and output a sensor signal based on the detected at least one of the position and the movement.</p>	<p>plurality of members, wherein a selected number of said plurality of members are formed as a unitary member in which flex is provided between said selected number of members;</p> <p>an actuator coupled to said gimbal mechanism for applying a force along a degree of freedom to said user object through said unitary member, wherein said actuator applies said force in response to electrical signals produced by said electrical system; and</p> <p>a sensor for detecting a position of said user object along said degree of freedom and outputting sensor signals to said electrical system;</p> <p>whereby said actuator and said sensor provide an electromechanical interface between said user object and said electrical system.</p>
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From the above comparisons it is clear that the pending claims are broader versions of the patented claims. Broader versions of patented claims are an obvious way for applicant to claim the same thing patented. *In re Vogel*, 422 F.2d 438, 164 USPQ 619, 623 (CCPA 1970). Vogel stated on page 623 "*The answer to the second analysis question, therefore, is yes, and the claim is not allowable in the absence of a terminal disclaimer. The correctness of this conclusion is demonstrated by observing that claim 10, by reciting "meat," includes pork. It is further noted that viewing the inventions in reverse order, i.e. as though the broader claims issued first, does not reveal that the narrower (pork) process is in any way unobvious over the broader (meat)*"

invention disclosed and claimed in the instant application.". Thus, this application's broader claims are not unobvious over the above identified patented claims.

Another relevant CAFC decision is *In re Braat* (CA FC 1991) 19 USPQ2d 1289. Braat stated on page 1292 "*The following are excerpts from the Board's opinion: We agree with and sustain the rejection of claims 8, 9, 10, 13, 15, 16 and 17 on the basis of double patenting with respect to claims 5/1 and 6/1 of the Dil patent. The claims here being broader than claims 5/1 and 6/1 in the Dil Patent, the double patenting rejection is of the type created by the courts to prevent unjustified timewise extension of the right to exclude granted by a patent no matter how the exclusion [sic, extension] is brought about. See *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982).*" Braat also stated on page 1293 first full paragraph "*The only difference between the claims of Braat and claims 5/1 and 6/1 of Dil is the omission of the requirement in the claims of Dil of information areas having side walls which are angled at a particular angle, and we do not think that omission of such a limitation in the present case would constitute an unobvious modification.*"

14. Claims 82-92 and 102-104 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim of U.S. Patent No. 5,721,566. Although the conflicting claims are not identical, they are not patentably distinct from each other.

The following table corresponds the pending claims with the conflicting patented claims.

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Pending claims	82	83	84	85	86	87	88	89	90	91	92	102	103	104
Patented claims	15/14/13/1	15	15	15	15	15	15	15	15	15	15	15	15	15

For claims 84, 85, and 86: See support in claim 1.

For claims 87 and 92: See Figure 5 piston rod 104a, 104b.

A comparison of pending claim 82 and patented claim 15 follows.

Pending claim 82	Patented claim
<p>82. (Previously Presented)</p> <p>An apparatus, comprising:</p> <p>a manipulandum moveable in at least two degrees of freedom;</p> <p>a linkage coupled to the manipulandum, the linkage including a plurality of elements, at least a subset of elements from the plurality of elements being flexibly coupled to each other and moveable in at least one of said two rotary degrees of freedom; and</p> <p>at least one sensor configured to detect at least one of a position and a movement of the manipulandum in the at least two degrees of freedom and output a sensor signal based on the detected at least one of the position and the movement.</p>	<p>1. An apparatus for interfacing the motion of an object with a host computer, said host computer updating a graphical simulation in response to user manipulation of said object and commanding said apparatus to generate force feedback sensations in coordination with events within said graphical simulation, said apparatus comprising:</p> <p>a support mechanism providing a degree of freedom to said object with respect to a grounding surface, wherein said object is moveable along said at least one degree of freedom by a user grasping said object;</p> <p>a sensor electrically coupled to said host computer through an interface and coupled to said support mechanism for sensing motion of said object along said first degree of freedom and providing signals to said host computer representing said sensed motions; and</p> <p>an actuator electrically coupled to said host computer and mechanically coupled</p>

to said object to create a passive damping resistance to motion of said object along said degree of freedom, said damping resistance resulting from fluid flow through an orifice and being varied by regulating a rate of passive flow of said fluid through said orifice in response to signals from said host computer.

13. An apparatus as recited in claim 1 further comprising a second actuator electrically coupled to said host computer and mechanically coupled to said support mechanism to create a passive damping resistance to movement of said object along a second degree of freedom, said second actuator including a damping mechanism that provides said damping resistance by regulating a rate of passive flow of a fluid through said orifice in response to signals from said host computer.

14. An apparatus as recited in claim 13 wherein said support mechanism includes a first linear member coupled between said object and said actuator to provide a first linear degree of freedom to said object, and a second linear member coupled between said object and said second actuator to provide a second linear degree of freedom to said object.

15. An apparatus as recited in claim 14 wherein said first linear member is a flexible member that flexes when said object is moved in said second degree of freedom, and wherein said second linear member is a flexible member that flexes when said object is moved in said first degree of freedom.

From the above comparisons it is clear that the pending claims are broader versions of the patented claims. Broader versions of patented claims are an obvious way for applicant to claim the same thing patented. *In re Vogel*, 422 F.2d 438, 164 USPQ 619, 623 (CCPA 1970). Vogel stated on page 623 "*The answer to the second analysis question, therefore, is yes, and the claim is not allowable in the absence of a terminal disclaimer. The correctness of this conclusion is demonstrated by observing that claim 10, by reciting "meat," includes pork. It is further noted that viewing the inventions in reverse order, i.e. as though the broader claims issued first, does not reveal that the narrower (pork) process is in any way unobvious over the broader (meat) invention disclosed and claimed in the instant application.*". Thus, this application's broader claims are not unobvious over the above identified patented claims.

Another relevant CAFC decision is *In re Braat* (CA FC 1991) 19 USPQ2d 1289. Braat stated on page 1292 "*The following are excerpts from the Board's opinion: We agree with and sustain the rejection of claims 8, 9, 10, 13, 15, 16 and 17 on the basis of double patenting with respect to claims 5/1 and 6/1 of the Dil patent. The claims here being broader than claims 5/1 and 6/1 in the Dil Patent, the double patenting rejection is of the type created by the courts to prevent unjustified timewise extension of the right to exclude granted by a patent no matter how the exclusion [sic, extension] is brought about. See *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982).*" Braat also stated on page 1293 first full paragraph "*The only difference between the claims of Braat and claims 5/1 and 6/1 of Dil is the omission of the requirement in the claims of Dil of*

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information areas having side walls which are angled at a particular angle, and we do not think that omission of such a limitation in the present case would constitute an unobvious modification."

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery A Brier whose telephone number is (571) 272-7656. The examiner can normally be reached on M-F from 7:30 to 4:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi, can be reached at (571) 272-7664. The fax phone Number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jeffery A. Brier/
Primary Examiner, Division 2628